



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/510,649

10/08/2004

Paul Gerard Ducksburg

04-837

9041

20306

7590

07/22/2008

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

EXAMINER

SETH, MANAV

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

07/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/510,649	Applicant(s) DUCKSBURG ET AL.	
	Examiner MANAV SETH	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 and 31 is/are allowed.
- 6) ☒ Claim(s) 11-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment received on March 14, 2008 has been entered in full.
2. Applicant's arguments with respect to rejected claims as presented in the amendment filed have been fully considered and are persuasive; therefore prior art rejections on the respective claims have been withdrawn. However, claims 11-30 are subject to new ground(s) of rejection(s) as shown below.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005 <<http://www.uspto.gov/web/offices/com/sol/og/2005/week47/og200547.htm>>), Annex IV, reads as follows:

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

4. Claims 11-20 are rejected under 35 U.S.C. 101 because:

Claims 11-20 are drawn towards a computer-readable medium having a computer program embodied thereon. Such computer executable programs are functional descriptive material that can constitute statutory products when properly claimed in combination with a computer readable storage device that allows the functionality of the program to be realized. However, while the claim defines the program in combination with a "computer readable medium," the claim language is not limited to the use of tangible storage media in combination with the program. Specifically, the disclosure defines the computer usable/readable medium as including storage media such as floppy disk, a memory, optical disc and a electrical signal (lines 16-18 on page 17 of the specification). While the floppy disk, a memory and optical disc (statutory media) are physical storage devices, but the electrical signal is a signal which is intangible energy, and therefore is not considered to be a statutory product. While the claim does read on at least some statutory embodiments (such as the floppy disk, a memory, optical disc), it also encompasses the combination of the program with the

electrical signal, which is not a statutory product. Since the claimed invention encompasses non-statutory embodiments, the claim is directed towards non-statutory subject matter.

Claims 11-20 as a whole define a electrical signal, and "[a] transitory, propagating signalis not a "process, machine, manufacture, or composition of matter." Those four categories define the explicit scope and reach of scope and reach of subject matter patentable under 35 U.S.C § 101; thus, such a signal cannot be patentable subject matter." (*In re Petrus A.C.M. Nuttjen; fed Cir, 2006-1371, 9/20/2007*).

Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claim as a whole is non-statutory. The examiner suggests amending the claim to include the disclosed tangible computer readable media such as "computer readable storage medium", while at the same time excluding the intangible media such as signals, carrier waves, etc. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first and second paragraphs of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 21-30 are rejected under 35 U.S.C. 112 first and second paragraphs as attempting to define a product (i.e., a machine or apparatus) entirely by virtue of its function, in the absence of any recited structure.

Products must distinguish over the prior art in terms of their structure (or structure + structure's function when claimed functionally) rather than function alone (MPEP 2114). Therefore, an "apparatus" not having structural limitations fails to "particularly point out and distinctly claim ..." the invention in accordance with 35 U.S.C. 112, 2nd paragraph.

Furthermore, while the specification disclosure may be enabling for a plurality of structural elements performing the claimed functions [1], the specification does not reasonably provide enablement for a single structural element (or no structural elements) performing all of the claimed functions. That is, given the claim in question, the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims ("A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph" because a single means claim covers "every conceivable means for achieving the stated purpose" and "the specification disclosed at most only those means known to the inventor" - *MPEP, at paragraph 2164.08(a)*).

Applicant is advised to define the system/apparatus by virtue of the individual structural element that serve to perform the individual functions recited in the corresponding method claim.

[1] Even when an apparatus/system is disclosed as being computer implemented (e.g., software implemented on hardware), the requirement remains that there be some structure recited in the body of the claim (e.g., a processor and a memory storing a program which when implemented performs the method steps). For purposes of "means plus function" language, individual disclosed steps corresponding to computer program elements operating on a processor (e.g., inputting,

filtering, detecting and resolving) may be considered as separate means (*Dassel*, 115 F.3d at 946–47, 42 USPQ2d at 1885).

Allowable Subject Matter

Reasons of Allowance:

7. Claims 1-10 and 31 are allowed.

The following is an examiner's statement of reasons of allowance:

The reasons of allowance for claims 1 and 31 should be evident from the applicant's arguments as filed in the amendment filed on 03/14/2008. The closest prior art as cited does not teach "transforming the importance-distinguished areas to correspond to location and number of scales of the wavelet transformation and establishing a wavelet coefficient threshold and forming a reduced wavelet image by discarding wavelet coefficients which both correspond to image areas of relatively lower importance and are below the said threshold" as recited in claims 1 and 31. Therefore claims 1 and 31 are allowed. All other claims depending on claims 1 and 31 are allowable at least by dependency on claims 1 and 31.

Claims 11-30 would be allowable for the same reasons as applied to claims 1-10 and 31, after all the 35 USC 101 and 112 rejection issues were resolved on these respective claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manav Seth whose telephone number is (571) 272-7456. The examiner can normally be reached on Monday to Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Bhavesh M Mehta/

Supervisory Patent Examiner, Art Unit 2624

/Manav Seth/
Examiner, Art Unit 2624
June 9, 2008